ABSTRACT OF THE DISCLOSURE

CACHE OPTIMIZED LOGICAL PARTITIONING OF A SYMMETRIC MULTI-PROCESSOR DATA PROCESSING SYSTEM

A method, apparatus, and computer instructions for assigning processors to partitions in a multi-processor data processing system. Optimal allocation sets are generated for unallocated processors in the multi-processor data processing system for a cache level. Each set includes an allocation of unallocated processors to at least one partition. A determination is made as whether a set in the optimal allocation sets match requirements for a set of partitions selected for the data processing system. In response to a match existing, processors in the set are removed from the unallocated processors, wherein cache usage by the processors is optimized for the cache level.